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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/005,772

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Frank Ivan Morris

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04/02/2004

IRELL & MANELLA LLP
840 NEWPORT CENTER DRIVE
SUITE 400
NEWPORT BEACH, CA 92660

EXAMINER

WONG, KIN C

ART UNIT

PAPER NUMBER

2651

DATE MAILED: 04/02/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/005,772

Applicant(s)

MORRIS ET AL

Examiner

K. Wong

Art Unit

2651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims (1-17 and 21-26) are rejected under 35 U.S.C. 103(a) as being unpatentable over Szeremeta (5796542) in view of Oliver et al (4414589).

Regarding claims 9, 12 and 14-17: Szeremeta discloses a servo track writer (as depicted in figure 3 of Szeremeta) including:

an actuator (as depicted in figure 3A of Szeremeta) having a plurality of actuator arms;

a read head (element 62 in figure 3A) connected to one of the actuator arms;

a write head connected to another of the actuator arms (see col. 39-58 of Szeremeta);

a chuck to secure a reference disk and a copy disk onto a spindle, the spindle to rotate the reference disk and the copy disk (securing the disk pack is considered well known common disk drive function); and,

a controller (as depicted in figure 3).

However, Szeremeta fails to mention the servo writing that read from a reference disk (or a disk surface) and write plurality servo information on the plurality of other

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disks (or surfaces). Oliver et al is relied for the teaching of reading one surface or disk while writing the others (see col. 17, line 64 to col. 18, line 62 of Oliver et al).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the servo writing procedure of Szeremeta as taught by Oliver et al. The rationale is as follows: one of ordinary skill in the art would have been motivated to provide a simpler servo writing for multiple disks as suggested in col. 17, lines 34-45 of Oliver et al.

Regarding claim 10: the limitations of wherein the controller further is to: position the read head at a first track on the reference disk; follow at least a portion of the first track with the read head; determine a position error signal for the read head; correct a position of the read head using the position error signal; and read the servo information from at least the portion using the read head are considered known Szeremeta describes the similar functions to the noted functions in col. 10, lines 1-25. Oliver et al also discloses the noted functions in col. 19, line 36 to col. 20, line 9.

Regarding claim 11: Szeremeta teaches that further comprising a plurality of copy disks and a plurality of write heads associated therewith (in col. 10, lines 1-25 of Szeremeta).

Regarding claim 13: Szeremeta teaches that wherein the spindle comprises a fluid dynamic bearing (or air bearing) spindle (in col. 8, lines 8-33 of Szeremeta).

Regarding claims 1-8: method claims (1-8) are drawn to the method of using the corresponding apparatus claimed in claims (9-17). Therefore method claims (1-8)

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correspond to apparatus claims (9-17) and are rejected for the same reasons of obviousness as used above.

Regarding claims 21-26: claims (21-26) have limitations similar to those treated in the above rejections, and are met by the references as discussed above. Claim 21 however also recites the following limitations of a fluid dynamic bearing spindle which Szeremeta discloses in col. 8, lines 8-33.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims (18-20) rejected under 35 U.S.C. 102(b) as being anticipated by Oliver et al (4414589).

Regarding claim 18: Oliver et al discloses a servo track writer (as depicted in figure 1 of Oliver et al) including:

an actuator (element 15 in figure 1) having a plurality of actuator arms and heads attached thereto;

a spindle (element 21 in figure 1) means to rotate a reference disk (or surface) and a copy disk, the reference disk to contain a plurality of tracks having servo

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information to be read by at least one of the heads (see col. 17, line 46 to col. 18, line 6 of Oliver et al);

a means to secure the reference disk and the copy disk to the spindle means (securing the disk pack to the spindle is considered an inherent common disk drive function);

a means to perform a track following operation on the reference disk (see col. 15, line 40 to col. 16, line 13);

a means to write the servo information onto the copy disk before the copy disk is incorporated into a hard disk drive assembly (writing a copy of the servo information prior to the final assembly of the drive are considered inherent).

Regarding claim 19: Oliver et al teaches that wherein the means (element 38 in figure 1) to perform the track following operation includes: means (element 15 in figure 1) for positioning a first head (element 100 in figure 1) on a track on the reference disk (or surface); means for following at least a portion of the track with the first head; means for determining a position error signal for the first head; means for correcting a position of the first head using the position error signal; and means for reading the servo information from at least the portion with the first head (in col. 17, line 64 to col. 21, line 21 of Oliver et al).

Regarding claim 20: Oliver et al teaches that further comprising means for incorporating the copy disk into the hard disk drive assembly, the copy disk to contain the servo information copied from the reference disk (in col. 17, line 46 to col. 18, line 25).

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Szeremeta (5642943), Titcomb (6315452), Toffle et al (6445540), Fleury et al (6505968), Kilmer (6600628) and Takahashi (5941644) are cited for fluid bearing spindle. Cribbs et al (5541784), Aggarwal et al (5375020) and Moir et al (4980783) are cited for servo writing in a multiple disks.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to K. Wong whose telephone number is (703) 305-7772.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Hudspeth can be reached on (703) 308-4825. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for all communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

kw

29 Mar 04


DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600